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ABSTRACT

This study of the first year of an inter-organizational diffusion effort by a national educational laboratory, a state department of education, and nine local school districts focuses on the implementation phase within the Research, Development and Diffusion (RD and D) strategy of an aesthetic education program which uses the arts as the discipline base for selection of curriculum. The paper is organized as follows: Section I summarizes the theoretical RD and D strategy for educational change and analyzes the significant dimensions as they occurred in the Pennsylvania diffusion tactics. Section II describes and develops hypotheses in three diffusion processes: rate of installation, rate of implementation, and rate of adoption by other sites and districts. Section III summarizes the mojor findings and suggests modifications of the theoretical RD and D diffusion strategies for program development. (Author/SHM)

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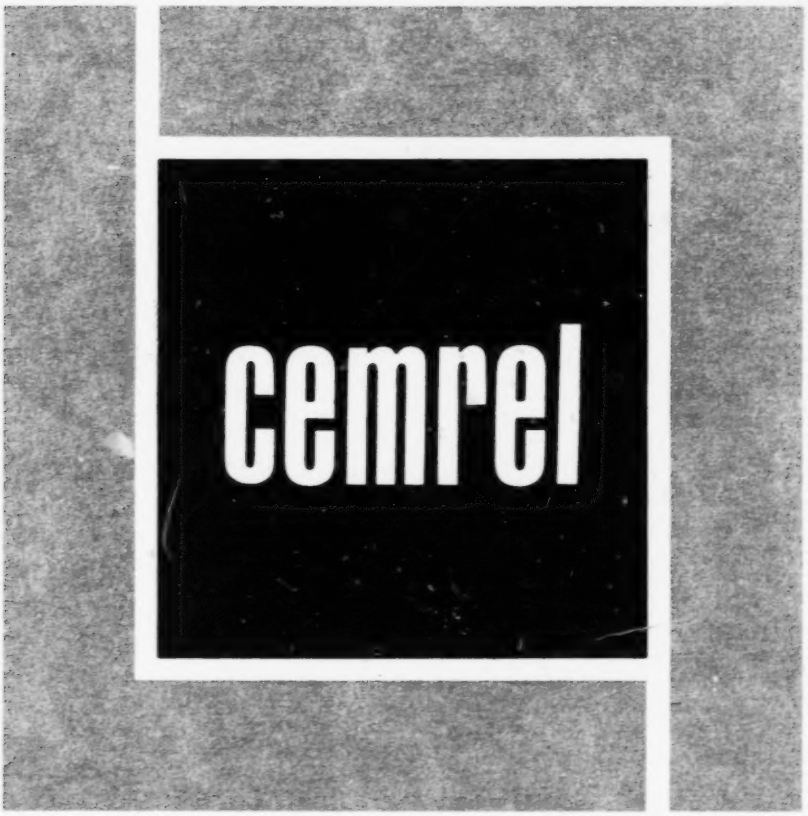

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Limitations of a Research, Development and Diffusion (RD and D) Strategy in Diffusion: A Case Study of Nine Local Implementations of a State - Adopted Curriculum.

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Systematic

The RD and D strategy for educational change is defined as those activities "brought about in an orderly sequence of goal-setting, planning, and systematic execution." (Havelock, 1971, p. 1). The process may be summarized as researching the theoretical and empirical bases for a curriculum, developing the curriculum, and then disseminating and diffusing it. Dissemination results in "widespread awareness of the invention among practitioners" and leads to adoption which includes program installation, implementation, and institutionalization. (Clark and Guba, 1967)[1] In this paper diffusion includes four distinct but related processes: adoption or purchase by state and district administrators whose authorative action directly results in official policy changes, installation of the curriculum materials at the school, teacher implementation or utilization of the materials, and institutionalization of the curriculum into the ongoing instructional processes of the school.

The focus of this study is the implementation phase within the RD and D diffusion strategy. The major conclusion drawn from this study of the first year of an inter-organizational diffusion effort by a national educational laboratory, a state department of education, and nine local school districts is that the degree of curriculum implementation and teacher utilization patterns varied with factors within the district. In other words, once the materials arrived at the school and the teacher was willing to try them, variations occurred which seemed more related to the local organization than the state or national organization or the curriculum per se. Thus, a reliance on primarily rationalistic (e.g., comprehensive, systematic planning) strategies which produces curriculum materials of high quality may be insufficient for implementation and institutionalization of the program as intended.

The program to be diffused is aesthetic education, or AEP. Although it uses the arts as the discipline base for selection of curriculum content, the intended user is the non-arts trained elementary classroom teachers. The program differs in several respects from existing arts curriculums. First, it broadens the definition of the arts as usually conceived by school personnel by including not only art and music but also drama, film, dance, and literature. The term "aesthetic" implies an integrated multi-arts approach. Second, the arts in the schools are traditionally taught by the specialists, itinerate teachers specially trained in the arts disciplines. This curriculum is intended for the generally educated elementary teacher. The term "education" is meant to convey that learning activities are intended to be appropriate for the "usual" elementary classroom directed by the classroom teacher. There is no other nationally marketed curriculum in the arts with these unique features.

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[1]This is a variation of the Guba-Clark model which identifies four RD and D stages: research, development, diffusion and adoption. Diffusion includes dissemination and demonstration; adoption includes installation, implementation and institutionalization.

Two program dimensions which are important for teacher implementation should be mentioned here. These can be generalized to other subject areas such as social studies, language arts, etc. The aesthetic education program envisions teacher decision-making in the sequencing of packages and in using the packages as "resources" and "springboards" for other aesthetic education activities. The packages may be thought of as units of study which, when combined and used as intended, is aesthetic education. "Packages" are graphically well designed and colorful boxes which contain the necessary materials and directions for pupil activities. It is also a non-recitational curriculum where the teacher directs pupil learning but not in the "traditional" large group lecture or recitational approach. The pupils spend most of their time interacting with the materials in small groups or individually in contrast to verbal interaction with the teacher.

This research is part of the summative evaluation of the Aesthetic Education Program developed at CEMREL, Inc., a U.S. Office of Education national laboratory. Data was collected through participant-observation procedures (H. Becker, 1958; L. M. Smith and P. Pohland, 1970; B. Glaser and A. Strauss, 1967) to develop a five-year summative evaluation plan and to evaluate the diffusion strategies.[2] As an Evaluation Associate new to CEMREL, my role was that of a "non-interfering observer." The second Investigator, an Evaluation Specialist who had five years experience in evaluating different CEMREL programs, participated more actively in policy decisions within the laboratory. However, all information was shared in the collaborative approach. Both Investigators were officially half-time and had positions at Washington University.[3]

Data was collected both at CEMREL and the nine extended pilot sites in Pennsylvania. We spent approximately 45 man days in Pennsylvania and averaged four visits per school district during the 1971-72 school year. Each site had 4 to 6 teachers using the materials and Local Coordinator from the district. We also attended the three two-day teacher workshops in August and the end-of-the-year meetings in Harrisburg between CEMREL and the state department of education. In addition, I collected data at the three-day CEMREL conferences of the National Aesthetic Education and Evaluation Advisory Committees, the

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[2]L. M. Smith and S. Schumacher, Extended Pilot Trials of the Aesthetic Education Program: A Qualitative Description, Analysis and Evaluation.

[3]Dr. Louis M. Smith is Professor of Educational Psychology and I was a third-year doctoral student in Educational policy-making and Program Development.

Teacher Education Conference, and the Diffusion Staff meetings. Besides the more formal events, numerous informal situations in Pennsylvania and at CEMREL were data-collecting occasions.

Our data consisted of several thousand pages of field notes and several file drawers of "documents" - official reports and "working papers" of the organizations, pupil papers and tests, teacher comment notes, and the curriculum materials. As always in this type of inquiry, we felt overwhelmed with "the data."

For ease of communication, let me clarify a few terms and abbreviations. The AEP is the Aesthetic Education Program; the PDE is the Pennsylvania State Department of Education; and RD and D refers literally to research, development, and diffusion but this will be defined in abstract terms later. Specialists are a district's itinerate teachers of art and music; supervisors are the district supervisors in various subject areas such as art, social studies or in elementary curriculum. Program and curriculum are synonymous; packages and materials are the tangible aspects of the program. A pilot site is a single school in a district.

This paper is organized as follows: Section I summarizes the theoretical RD and D strategy for educational change and analyzes the significant dimensions as it occurred in the Pennsylvania diffusion tactics. Section II describes and develops hypotheses in three diffusion processes: rate of installation, rate of implementation, and rate of adoption by other site's and districts. Section III summarizes the major findings and suggests modifications of the theoretical RD and D diffusion strategies for program development.

Section I: THE RD and D THEORY OF EDUCATIONAL CHANGE WITH EMPHASIS ON THE PENNSYLVANIA DIFFUSION STRATEGY

The RD and D approach to educational change has been applied in several curriculum areas for over a decade. Perhaps the earliest was in science and math, following the public reaction to Sputnik. In the 1960's the approach was applied to the social studies with federal monies supporting curriculum development located at universities. With the passages of the Elementary and Secondary Educational Act in 1965, educational laboratories became the main vehicle to "bridge the gap" between research in education and its application in the schools.

Regardless of the particular context of national political events, organizational structures for solution of educational problems, or the particular curriculum or program developed, one can identify the important dimensions of the RD and D model. In this approach, only educational problems of "national significance" are selected for systematic resolution through an RD and D process. Although an educational problem might be local or unique

to a particular geographic section - e.g., teaching reading to Spanish-speaking children, if it has implications of "national significance" it falls within the jurisdiction of this approach.[4] Thus, most solutions proposed are for a national audience to meet a pressing national need and, as such, requires a systematic approach and usage of federal monies (Borg, 1970; Boyan, 1968). How these national educational problems are selected is strangely ignored by the writers on the RD and D approach.[5] (Boyan, 1968; Borg, 1970; Havelock, 1971; Guba, 1968; Bennis, Benne, Chin, 1969; Clark and Guba, 1967).

The nature of the selected problem is the need for "new knowledge" in the concrete form of a product which contributes to the improvement of educational practices. As Norman Boyan, Director of Educational Laboratories, U.S. Office of Education, wrote, the "contribution to knowledge, per se, is less important than the contribution to improving educational practice and solving educational problems of national significance" (1968, p. 25). Thus, the standard is "What difference does (or can) it make?" An implicit assumption is that the product can show substantial differences within a reasonably short time and is immediately usable by the practitioner. Thus, the nature of the national educational problem is the need for a research-based, developed product which changes educational practices.

The emphasis on an RD and D product as an approach to educational change is significantly different from other approaches. Educational problems are not primarily ones of organizational change such as state or district reorganization, although the usage of the product may lead to organizational changes (Brickell, 1961). Educational problems are not directly related to teacher training, either pre-service or inservice (Koerner, 1963), although usage of the product may lead to changes in teacher behavior. Educational problems are not primarily ones of conflicts over scarce resources in political struggles between organized interest groups and governmental authorities or power elites (Masters, Salisbury, Eliot, 1964; Kimbrough, 1964; Hunter, 1953). Educational problems are not primarily financial ones which if more money were supplied to the state or local district, educational practices would improve

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[4]Originally the RD and D laboratories were intended to resolve educational problems of the region each lab served. Even before the labs began operation, the shift from a regional to a national focus began. See Boyan at a 1965 conference (1967). By 1968, AEP considered aesthetic education as a national problem (Kelly, 1971, p. 50).

[5]The Far West lab, as did CEMREL, took "user-need" surveys within the region (Borg, 1970). If these were followed to their logical conclusion, 20 labs would have been working on reading problems and other similar programs. When the shift in OE policy occurred from regional to national focus, the issue of how a lab identifies a national educational problem was never responded to by the writers in the published literature.

(Mort and Cornell, 1938). In fact, an implicit assumption is that such a felt need exists among scho[ol personnel, that when a quality product becomes available, it will automati[cally be adopted. Priorities in school policies and budgets will be shifted for purchase and usage of an RD and D product.

The RD and D developme[ntal cycle for a product has been characterized as one of "successive appro[ximation" (Havelock, 1971). The cycle of field testing, evaluation, and re[design continues until the product meets certain specifications. The proces[s is time-consuming and requires an initial high developmental cost (Borg, [1970). If one assumes that the development cycle is "foolproof", then, logic[ally, any product produced by this process has certain proficiencies. The[se include: a) a logical relation to the research-based theoretical mo[del used for curriculum development, b) demonstrated "proof" based on ev[aluation studies that the product achieves its intended objectives and "ma[kes a difference" in educational practices and c) efficiency in ease of in[novation installment in an on-going institution without requiring significa[nt changes in school organization, physical structure, staffing, or ma[jor policies. W. Borg (1970) and R. Havelock (1971) characterize such a [product as "user-proof" - guaranteed to work with almost any teacher regardle[ss of her training, educational philosophy, or personal style of teaching. [The role of the teacher "should be to diagnose the needs of each student, [select from among proven educational products, and conduct necessary treatment[s" (Borg, 1970, p. 14). Presumably the research findings from the RD and D [cycle informs a teacher how to make decisions to provide "treatment" to a ch[ild in a classroom social situation.

Because of the nationa[l need and the product proficiencies, only mass audience dissemination is [necessary. In fact, except for national mass audience dissemination whe[n the product is completed, diffusion strategies are theoretically unnecessa[ry. Dissemination automatically leads to widespread adoption resembling [a national movement. Adoption through administrative fiat by institution[s with legitimate authority is "a common diffusion pattern" (Havelock, 1971). [The implication of the RD and D approach is that a potential adopter needs [only to see a tangible product which is graphically well-designed and construct[ed and be provided with information to legitimize the adoption decision. In[formation derived from research activities by an organization of high credi[bility such as a U.S. Office of Education RD and D laboratory is assumed suff[icient.

The RD and D strategy [for educational change may be characterized as rationalistic, sequential, [comprehensive and complex in contrast to continuous problem solving or intuiti[ve reactions to events as they occur. (Lindbloom, 1969). Rationality refers [to deliberate planning ahead often for five years in advance with PERT flow [charts, the tasks for systematic execution within a specified time period. [linear sequencing of the components of research, product development, and d[iffusion and systematic coordination of different specialists, organizations [and activities provides continuity. Comprehensiveness refers to the sco[pe, e.g., national, and the number of people and tasks involved. Complexit[y refers to the variety of organizational structures doing specialized tasks wi[th multiple and interlocking ramifications.

Organizations usually include U.S. Office of Education research laboratories, universities, schools, state department of education, associations of educators and other professions, public and private funding agencies, publication companies, etc. The specialized tasks refer to those previously mentioned: product development, research, dissemination, adoption, implementation, and institutionalization.

Anticipating ideas presented more fully below, the RD and D approach to change is logically related to the national emphasis and scope of the educational problems at the research and development stages of the process. However, there is no national educational network or system for diffusion purposes. Instead, there exists a variety of idiosyncratic organizational structives and responses to a research-based, developed curriculum.[6] Second, the RD and D model is more directly linked to the adopter or administrator than to the user or the classroom teacher. In contrast to local innovation where classroom teachers devise a curriculum, the RD and D approach does not automatically guarantee products will be immediately useable as intended. Thus the rate of implementation varies as teachers learn to use the product within the local situation.

The Pennsylvania Diffusion Strategy

Turning now to the diffusion strategy used in the Pennsylvania setting, we find that the project exemplifies the rationalistic, sequential, comprehensiveness and complexity dimensions typical of the RD and D approach. However, an additional element was present - that of an exchange process and mutual goal-setting which resulted in an overriding tone of cooperation, not competition, between various organizations, groups, and individuals. This aspect of a cooperative effort may be viewed as mutual goal-setting between organizations (Pohland, 1970) to attain the envisioned project outcomes. It may also be viewed as an exchange process to share scarce resources within a social, economic, and political milieu of competition (Masters, et al., 1964; Salisbury, 1970, Thompson, 1967).

To be more specific, by January, 1971, a year and a half before our observations began, the State Department of Education and CEMREL had a formal agreement to establish a five-year project to implement the aesthetic education curriculum in Pennsylvania. The project, a cooperative association between three types of organizations: a national educational laboratory, a

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[6]Variations are not only in organizational structures but as will be demonstrated, in many other areas. This study suggests that a de facto national system of education (Miles, 1964) does not seem to exist when one studies the social processes in educational systems.

state department of education, and local school districts would serve multiple purposes for each organization. The envisioned project outcomes to be completed by 1976 were 1) state-wide diffusion of the state adopted AEP curriculum, 2) classroom implementation of aesthetic education, 3) completion of curriculum development by AEP, 4) in-service and pre-service teacher education programs institutionalized at state and local level, and 5) summative evaluation of the curriculum and project change strategy.[7] In short, if one had to state the practical purposes of the agreements and the plans, the diffusion project was to make aesthetic education a conscious curriculum "area of study"[8] in the general education of all elementary school children.

Insert Figure 1 about here

During 1970-71, our year of observations, nine districts served as pilot sites. The selection and location of these nine sites by the state department of education reflected certain assumptions regarding diffusion. These sites were selected primarily on the basis of "who you know" that has a demonstrated commitment at district level to the arts in general education. A "demonstrated" commitment was indicated by an on-going program which had received some recognition in the state on an informal "reputation", "prestige" or "friendship" basis. This selection procedure suggests that the rate of district adoption is related to the channels of communication and sources of information, e.g., the "opinion leaders." Thus in considering adoption, a district superintendent's "response is not directly determined by the message which is communicated but is largely determined by his relationships with other persons whom he sees as important to him." (Carlson, 1963, p. 5). Adoption is viewed not as an individual process which leads to a slow but steady rate of adoption but a social process which leads to a "snowball" or "chain-reaction" rate of increase.[9]

The existence of an ongoing arts program in general education might also indicate that a district would have an "expressed" need for an elementary aesthetic education materials. By serving as pilot sites, these districts

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[7]A Department of Education Plan for the Establishment of a Pilot Aesthetic Education Program in Cooperation with Selected Schools, CEMREL and Other Interested Agencies. January, 1971. "Memorandum of Understandings and Agreements" of the nine districts.

[8]This mode of phrasing of aesthetic education as an "area of study" is from Madeja (1971), the Director of CEMREL's AEP Program.

[9]There is some research which supports the social theory of adoption. See Katz, (1969) and Carlson, (1965). However, Coleman, Katz, and Menzal (1966) identified two diffusion processes: the "snowball" and the steady rate of adoption by "isolates."

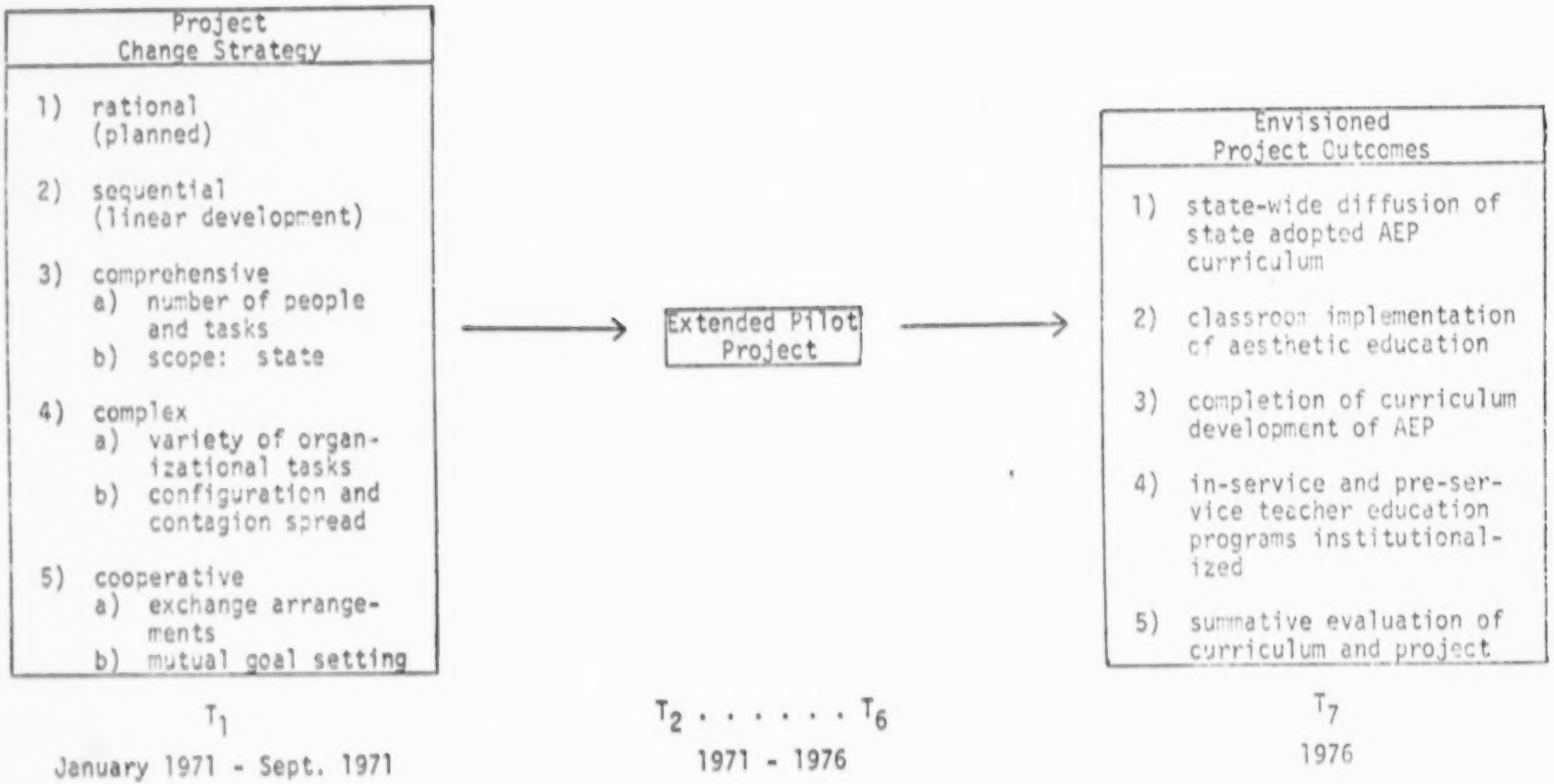

Figure 1: An Educational Change Strategy and Envisioned Project Outcomes*

*Smith and Schumacher, op. cit., p. 17

could assess the implementation process at one school for purposes of district-wide diffusion and institutionalization. Finally, districts with existing programs would have art and music specialists and supervisors in the arts disciplines who could serve as resource persons and support services to the classroom teacher. However, the usage of district specialists and supervisors in such a manner would probably necessitate changing the usual "way of doing things."

The location of the nine districts, three in each political-geographic section of Pennsylvania reflected other assumptions regarding the diffusion of educational innovations to school people. The districts were to serve as demonstration sites of the program. The geographic dispersion of the sites in eastern, central, and western sections of Pennsylvania allowed visitation by school people to be more feasible. Within each geographic section, the three sites could be categorized along different continuums of demographic data: socio-economic level of the district, urban - rural community, ethnic and racial composition of the school population, district and school organizational patterns.

The placement of demonstration sites in public schools is a different organizational pattern than state-operated demonstration centers used in New York (Brickell, 1961) and more similar to those in the Illinois Program for the Gifted. (House, 1970). In New York, Brickell (1961) found that the ideal circumstances for diffusion by demonstration are "ordinary, unenriched and normal." Anything an observer could label as "abnormal" or "unrealistic" would rob the demonstration of its persuasive effect.[10] Thus the usage of public schools for diffusion compared to a "controlled" situation may increase the rate of natural diffusion. "Natural" diffusion refers to dissemination by informal word-of-mouth and seeing the packages in use in contrast to diffusion resulting from planned intervention such as a Title III project sponsored by the state department of education or presentation of research information to persuade a potential adopter.

I earlier conceptualized the Pennsylvania diffusion strategy as one of inter-organizational cooperation best explained in terms of an exchange analysis. By introducing exchange analysis, I am suggesting a theoretical

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[10]The relationship between demonstration and later district adoption in Illinois has been investigated by House, et al. They concluded "The fact that visitors valued demonstration programs highly had little relationship with later adoption. Situational constraints in the adopting district seem to be of greater importance than the intrinsic characteristics of the demonstrated program or the process of demonstration itself." (1970, p. 33). See also Lapan, 1971. However, unlike the Illinois program, in Pennsylvania, the curriculum was "exportable" in that it could be ordered from CEMREL, Inc.

thrust for understanding the processes of this diffusion strategy.[11] Briefly, the exchange arrangements involved both benefits and costs to each participating organization to facilitate inter-organizational cooperation for diffusion.[12] These exchange arrangements were partially formalized in official documents and agreements between the organizations and partially arrived at through informal consensus following negotiation and bargaining. The benefits and costs operated at different degrees of visibility during the first year of the project. These are summarized in Figure 2.

Insert Figure 2 about here

In this case, the national laboratory obtained sites for continuing summative evaluation of its new materials, a potential curriculum market, visibility of both the diffusion project and product. The costs were for the initial set of materials and several personnel - a project Coordinator, two evaluators, and several workshop staff. The state department of education continued its Quality Education program development including fulfilling a Governor's platform and an official void: a state approved curriculum in the arts for the elementary schools. The costs were in personnel time for monitoring local implementation, establisning a state diffusion network, and re-defining the role of the Bureau of Fine Arts within the state department of education. The local school districts had varying agendas, but were attracted by cost free materials in an area of perceived need and by the excitement which comes from being related to a new state and national program. The costs were essentially those of teacher and supervisory resources in training and implementation. As our discussion develops, I will describe the alterations of these initial plans and arrangements as the first year unfolded.

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[11]One may further delineate exchange analysis as political, economic and social exchanges. In this case study, the arrangements resembled a political exchange where the costs and benefits were tangible and specified obligations in contrast to social exchange (Blau, 1964; Homans, 1961) but not immediately translated into a quantified medium of trade, e.g., a dollar and cents price, in contrast to economic exchange (Olson, 1965). However, the focus is inter-organization exchange analysis (See Schumacher, in process).

[12]Each organization is a cluster of sub-units and positions which held alternative and often complementary perspectives on project costs and benefits. Thompson (1967) suggests organizational cooperation may be obtained through contracting, coopting, and coalescing. Coalitions are based on exchange arrangements and more constraining because of a commitment to future joint decision-making.

Levels and Kinds of Organizations

	The National Laboratory	The State Department of Education	The Local School Districts
Benefits	1. Sites for Summative Trials and Evaluation of Curriculum 2. Potential Market for Curriculum 3. Project and Laboratory Visability	1. Fulfillment of Governor's Platform 2. Extension of Quality Education Program 3. New Teacher Education Programs	1. Cost Free Materials 2. Prestige; as Part of a State and National Project 3. Filling "perceived" Curriculum Void 4. First Step in Eventual District Adoption (e.g., Ease of Local Evaluation) 5. Staff Development
Costs	1. Supplying 90 Instructional Packages 2. Project Personnel 1. Coordinator 2. Workshop Instructor 3. Evaluator	1. Revision of Fine Arts Bureau 2. Monitoring Resources to Local Districts 3. Development of Diffusion Network	1. Teacher and Supervisory Resources for Implementation 2. Resources as Demonstration Center 3. Continuation of Diffusion Expenses

Figure 2: Exchange Arrangements*

*Smith and Schumacher, op. cit., p. 15.

Section I: LOCAL VARIATIONS IN RATE OF INSTALLMENT, IMPLEMENTATION, AND ADOPTION

In assessing t[he rate of implementation, we are asking the ques-
tions - once the pa[ckages arrived at the school, did variations exist in
the rate of impleme[ntation and, if so, which factors best account for local
variations at the n[ine sites?

District diffu[sion processes varied widely in the nine sites. Some
districts rapidly w[ent through the diffusion processes of installing the
packages at the sch[ool site, implementing or extended usage, and institu-
tionalization of th[e AEP program into the ongoing instructional processes.
Other districts had [some initial difficulties in installing the packages
but with different [patterns and degrees of organizational supportiveness,
all districts imple[mented the packages. The rate of district implementa-
tion, as will be di[scussed later, had consequences for district and
state-wide diffusio[n.[13]

The diffusion [processes at the local level may be analyzed in terms of
three stages or pha[ses. These are 1) ease of installment of the packages at
the school and mini[mum classroom usage, 2) implementation of the packages or
extended classroom [usage where most package activities or lessons are explored
fully, 3) instituti[onalization of the AEP program into the ongoing instruc-
tional processes of [general education. Because the last package installment
occurred in late sp[ring, the processes of district diffusion were cyclic and
continuous from Oct[ober to May.

All nine sites [experienced three factors which occurred in this project.
These were the "del[ay of delivery" of the packages, the periodic visitations
by the project Coor[dinator to all sites, and the Familarization Workshops
for the project te[achers. The schools were initially promised five packages
in September and fi[ve in January. Due to inter-organizational factors, only
five packages were [delivered in 1971-72 and the remainder re-scheduled for
fall of 1972. Alth[ough one might hypothesize that the delay of delivery
accounts for varia[tions in local implementation, this was only one factor and,
as will be argued, [not the major factor. Even when all sites received a
package at the same [time of the year (e.g., October, December, February,

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[13]"Rate of di[ffusion" is a concept frequently used in diffusion studies
implying that diff[usion is an ongoing process. I have applied the concept of
"rate" to the RD a[nd D processes and delineated it further into rate of install-
ment, rate of impl[ementation, rate of institutionalization, and rate of adoption
or purchase. It i[s conceptually similar to N. Gross, et al. (1971) "degree of
implementation" ex[cept it implies an ongoing process. In this study of a
5 year project, "d[egree" cannot be determined until project completion.

March, and April), the variations in local implementation still occurred.[14]

In any inter-organizational project involving national, state, and local organizations, the role of the project Coordinator is central to the multiple efforts to prevent "system breakdown." A project Coordinator was specified in the plan for Pennsylvania Extended Pilot Trials. The final arrangements were that in the first year, the Coordinator would be provided by CEMREL, and have the endorsement of the PDE. Because of her role during the pre-project year to set up the five year plan, she had established working relationships with the PDE and district administrators. She had intimate organizational familiarity through past employment at CEMREL and the Office of Education. Significantly, she had a working knowledge of aesthetic education from contact with individual package writers, the AEP staff, and a long association with those concerned with aesthetic education in the public schools and in teacher-training. Her commitment to the "idea" of aesthetic education was both deep and personal.

The primary functions of the Coordinator at the local sites were to facilitate the ease of installment by seeing that the packages when sent from the publishing company were delivered to the project teachers and to monitor the implementation.[15] Although several districts tried to redefine the Coordinator's role as one of instructional supervisor or demonstrating teacher, her job was an administrative one. Almost in spite of the Coordinator's attention to each site, the local variations in implementation existed.

Third, most project teachers and local project Coordinators attended a two day Familiarization Workshop sponsored by CEMREL and the PDE. These were held at the beginning of the school year in each geographic section: eastern, central and western Pennsylvania. The format of these sessions was organized by the CEMREL staff, the project Coordinator and two staff members who had written and edited several of the five packages. The Workshops were to give an overview of the state diffusion project and of the aesthetic education curriculum to the intended user, the classroom teacher. Also present were those who could provide support services during package implementation: local Coordinators, district supervisors and/or specialists, and members of the State Department.

Since our focus here is on local implementation and the Workshop was the first formal contact which classroom teachers had with the aesthetic education program, perhaps we should look at this program segment more closely.

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[14]The "delay of delivery" did have major consequences for the total Pennsylvania project. For a more detailed analysis of antecedents and consequences, see Smith and Schumacher, op. cit. pp. 24-28, 40-42. Relevant conclusions are cited later in this paper.

[15]These were only part of the Coordinator's responsibilities since local implementation was one aspect of the state diffusion project.

What was communicated to the teacher as the user of the packages? Briefly, the teacher heard of the importance of teacher decision-making in using the packages, references to teaching roles and a personal style of teaching and different perspectives or definitions of aesthetic education.

The curriculum was presented as a "resource" and a "springboard" for broadening pupil experiences and integrating aesthetic education into education. Unlike a highly structured curriculum where directions were stated in step-by-step teacher behaviors, these packages encouraged the teacher to supplement and adopt the activities to pupils. Teaching roles were identified for each package. One CEMREL staff member said "As I teach it, I identify these roles. There is a role of joining in, a role of demonstrator, a role of analytical perceiver, a role of serving as an audience, a role of matching social dynamics in the pairing and grouping of kids."

As teachers worked in small groups during the two days and rotated among the CEMREL staff, various statements were made which reflected a particular teaching style or classroom management approach. The curriculum writers appeared to make assumptions about a teacher's personal style.

> I was wondering if I could predict from experiencing some of the packages and listening to the teachers and the CEMREL staff about type of teaching skills necessary to teach all five of these packages, and not just a single one. Are there any kinds of underlying teaching skills or characteristics I can identify for the broad range of aesthetic education? I hear over and over again: No. I, "You have to be able to tolerate noise in your classroom." No. 2, "You have to be able to tolerate movement in your classroom." No. 3, "You have to be able to tolerate disorder." No. 4, "You have to respect the individuality of your pupils." No. 5, "You have to preserve materials." But, also there is: No. 6, You have to have some kind of skill in managing materials because some of them do involve use of machines; No. 7, apparently in some of the packages you have to have a sense of rhythm; No. 8, you have a skill to see the interrelationships of the disciplines of art and music and drama and see how it fits the basic eudcation curriculum; No. 9, You have to have skills in small group management. (OBS: 9/16)

Teachers heard and discussed different perspectives or schemas of aesthetic education. Analytically, we may separate these into different levels of generalizations or frames of references for teacher decision-making. Aesthetic education was identified as: 1) a single package such as Sound and Movement or Dramatic Plot, 2) a series of packages which could be

sequenced to emphasize particular teaching goals,[16] 3) a total school program related to the local arts curriculum including those activities taught by the specialists, 4) a curriculum which necessitates certain teacher behaviors to implement a package to the fullest intent 5) a curriculum which fosters the development of a child's positive self-concept, and 6) a curriculum which supports public policy goals of attendance and support for the arts in the American culture.[17] These various perspectives of aesthetic education were never fully presented in an organized manner but evolved from the workshop activities. Each teacher was expected in a fundamental sense to define aesthetic education for herself.

These multiple perspectives can be viewed as "conceptual complexity" and related to "conceptual clarity." "Conceptual complexity" refers to the various ways aesthetic education can be viewed - as a package or a curriculum area of study, as a total school program, as teacher behavior, or as child development. How a teacher views the aesthetic education program from a simple or single conceptual framework to a complex or multi-conceptual framework would appear to effect her decision in package utilization.

"Conceptual clarity" refers to an awareness by the teacher of how she views a particular package in relationship to her concept of aesthetic education. Conceptual clarity by a teacher was expected due to the open-endness of each package and for sequencing packages. Guidelines for sequencing the packages were deliberately left vague in order that a teacher might adopt the packages to her particular class.[18] However, during early usage of the packages without a schema for relating the packages to each other the teacher feels confused.

The Familarization workshops for the majority of teachers resulted in "teacher willingness to use" the packages during her instructional time with the pupils. Exactly how the packages would be used by the teacher and the various local organization responses as to the locus of decision-making, and the role of the specialists, supervisors, and local Coordinator would have to be worked out by the local district as the year progressed.

In summary, the rational, sequential, comprehensive and complex approach to educational change, typical of the RD and D strategy, resulted in a

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[16]Packages could be sequenced by reading difficulty or grade level, the discipline-based such as music in Sound and Movement and Meter, or the expressive skills from non-verbal communication in Characterization to word usage in Creating Word Pictures and Dramatic Plot.

[17]See Berlak for a definition of public policy goals as distinct from programmatic goals (1970).

[18]This also partially resulted from the developmental aspect of the packages. The teachers only "saw" five packages at the workshops and merely heard of the other 5 and possibility of 40 to 50 more for K-6 pupils.

research-based, highly developed series of packages for local implementation, a project Coordinator for administrative smoothness and Familarization workshops for ease of package installment.

Ease of Installment

Turning now to the nine districts from October to May, the rates of program installment, implementation, and institutionalization varied. Once again, anticipating our findings, as the ease of district installment increased, the rate of district implementation was maintained or accelerated. If the rate of district implementation slowed but additional district support services intervened, the rate of district implementation was maintained or accelerated. The antecedents and consequences of the rate of implementation will be analyzed below for purposes of identifying the rate of district-wide diffusion by the end of the first project year.

The first phase, the ease of package installment at the site varied with organizational fluidity, administrative support, the degree of existing "curriculum centrality", the divisibility of the program, and the "teachability" of the packages. Organizational fluidity refers to the amount of organizational adjustment needed to maintain the installation processes. It refers to the degree of flux or change in school personnel and district conditions during this first year. Examples of changes by September, were teachers who were first year teachers or new to the district, teacher absenteeism from the Familiarization Session due to illness, cut-backs in district funds resulting in one local Coordinator being "free" one day instead of two days a week, first year arrangements of an "open-classroom" and team-teaching, a local Coordinator promoted from curriculum specialist to Principalship, changed in-service time arrangements due to teacher negotiation, implmentation of other new curriculums, etc. Some changes occurred through out the school year such as a teacher strike in one district and natural teacher turnover (e.g., pregnancy, marriage) of all the second grade teachers of another site. Although such changes are a part of the life in the public schools,[19] the number of changes increased organizational adjustments and affected the ease of package installment.

Administrative support seemed to be the primary factor in two districts where there was initial teacher resistance to installing the packages at the site selected by the district.[20] At one site, where teachers were disillusioned by their experiences in the workshop, and suspicious of a curriculum which their own district did not develop for their pupils, the administrative support through use of district supervisors and directives from the Principal got the teachers to the point of "willingness" to try the packages. At

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[19]Charters, (1970) concluded from a study of Oregon teachers from 1962 to 1967, that in a five year period, only 20% of the teachers remained in their district.

[20]The importance of administrative support for innovation purchase has been demonstrated by Carlson (1965) and Bricknell (1961). I am suggesting here that it is important in the rate of installation.

another site, the package installment was so slow that by April, the district changed the pilot site to another school. In this case, attempts of administrative support either from Local Coordinator or the site Principal were ineffective in changing the initial teacher resistance to trying the packages. The field notes record the complexity of the issues when the Evaluators made their first visit to this site in mid-November.

> After a while in talking to two or three people, I got the feeling that first of all the district got caught with "their pants down" - they've done nothing with the package. They discovered this when they got the Coordinator's letter requesting information for a newsletter and news of the Evaluator's visit scheduled for Thursday . . . . . Apparently there are two faculty cliques operating in competition here. When the Principal was sick last year Betty was called the Acting Principal, which I presume means she had the decision making power. Inez was called Assistant to the Principal, which sounds like she doesn't have decision making power but if she is an aggressive person she might have it anyway. Betty is head of the K through 2 grade and Inez leads the 3 through 5 team. Without a strong Principal, these two cliques run the school and now one is for aesthetic education and the other is not. This role of the clique business is bound to have an effect on the packages trying to cut across these grade levels. . . . . The Principal explained that the curriculum is all skills approach in the morning for the 3-5 division of the elementary school. That means that there is no time to teach the CEMREL packages until one'o'clock, when the children are with their homeroom teacher and heterogeneously grouped by grade levels. There are three teachers for the third grade, but only one teacher is using it. The principal agreed "it's disaster" to put the package at third grade level as the entrance because of the teachers they have, and particular Inez who is extremely anti the whole approach implied in the CEMREL packages. She's a leader of one faculty clique. They thought it would be a good idea to have only one teacher to handle the package and go through the package instead of trying to circulate it among three teachers. They really felt there was resistance by the other two teachers. They hoped that the teacher willing to try it would get excited over the package and "it would spill over." (OBS: 11/18)

However, this was the extreme case where the faculty cliques appeared to "run" the school and by chance, the first package to arrive was to be taught by the grade level associated with teacher resistance. When the site was changed to another school in April and five packages were available, with the combination of strong Principal support and leadership, "curriculum centrality", and recognized "teachability" of the packages, this second site within a month had implemented the whole program and was already

institutionalizing the program into their ongoing instructional processes.

The degree of existing "curriculum centrality" refers to the number, type, and variety of events in the classroom, school, and district which were similar to pupil activities in the aesthetic education program. The degree of existing "curriculum centrality" is seen in terms of district supervisors and arts specialists, district provision of arts materials and expectations that the elementary teacher use them daily, traditional school and district activities such as Arts Festivals, Band concerts, high school drama for elementary children, spring concerts, and usage of local arts resources.

For AEP utilization, the more "curriculum centrality" in the classroom which is unstructured and left to the classroom teacher with her own materials, the faster the rate of installment and implementation. However, the more curriculum centrality in the classroom whcih is structured by the district as an area of study to be approached either through specific district materials or by the itinerate specialists, the slower the rate of installment and implementation. This slower rate of implementation is caused by each district having to find ways to avoid competition among existing materials and AEP packages and to establish cooperative utilization patterns between the classroom teacher and the specialists to institutionalize the packages into the ongoing arts programs.

The "teachability" of the packages became one of the most important findings of our study. It has many connotations depending upon which phase of the diffusion process is occurring. At the installment phase, "teachability" refers to perceptions that aesthetic education is important for schools to teach, can be taught without specialized teacher training and children will respond positively. Most elementary classroom teachers had viewed art and music (and primarily just those forms of the arts) as teachable by specialists. To many, the provision of a curriculum based on the arts disciplines with the expectation that non-arts trained elementary teachers could use the materials profitably was both revolutionary and threatening. Teachers who recognized the "teachability" early were those who had either arts background or interests and/or had already been doing similar activities in their classrooms. Most teachers seemed to believe what they have seen in their own classrooms in contrast to what official spokesmen or research reports stated.

Finally, one other aspect of the AEP program seemed important for ease of installment. AEP is a divisible curriculum, consisting of packages which can easily be inserted into classroom activities. Unlike a textbook intended to serve as the major pupil material for a school year with a chronological structure as is often found in social studies, these packages are topically or content structured. For rate of installment, the divisibility of the packages was an advantage, especially in view of the delay of delivery.[21]

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[21]Carlson (1965) found that "divisibility" of the innovation increased the rate of adoption or purchase. In this study, "divisibility" of the program increased the ease of installation but had other consequences for implementation.

However, as will be pointe[d out, for teacher extended usage or implementation, the divisibility of the pa[ckages often, in this first year, encouraged fragmentation and compartm[entalization of the packages into existing curriculum areas of study. Hypothetically we would suggest that once a teacher acquires "conceptu[al clarity", then aesthetic education as a legitimate curriculum area of st[udy is recognized.

A summary of these fa[ctors or variables is presented in Figure 3. We suggest that the ease o[f local installment of the packages at the site was influenced by constant [factors which were present at all sites: the delay of delivery of the p[ackages, the project Coordinator's visits, the teachers "willingness to t[ry"[22] the packages, and the program divisibility. Since these were constant [factors, then the variations in the ease of installment appeared more related [to local variables. The most significant ones at these nine sites were t[he extent of "organizational fluidity", degree of administrative support, a[mount of existing "curriculum centrality" and early recognition of "teachabili[ty" of the packages.

Inser[t Figure 3 about here

Rate of Implementation

The ease of package [installment did not automatically increase the rates of implementation a[nd eventual program institutionalization.[23] Even when the package installm[ent occurred easily and quickly, there was local variation in the utilizat[ion time and utilization patterns. The variations in the rate of program im[plementation are similar to the findings from a case study by N. Gross, e[t al. In Implementing Organizational Innovations (1971), they concluded th[at "resistance . . . can develop among organizational members who are positively [oriented to the change after an innovation has been introduced into the organ[ization as a consequence of frustrations they experience in attempting [to implement it." (p. 198. Italics by authors.)

[22]We consider this a "constant" variable even though two negative cases were cited. These two negative cases appeared to also result from the particular management of the first W[orkshop. The second and third Workshops consistently resulted in teacher "will[ingness to try" the packages.

[23]The most complete [description of program institutionalization is found in Madeja, "A Systems Approa[ch to Teaching the Arts" (n.d.). Although "systems" implies connotations not [intended by the author, the paper does describe how a school could function with[the program as intended. However, this was not conveyed in a systematic man[ner to the Pennsylvania teachers.

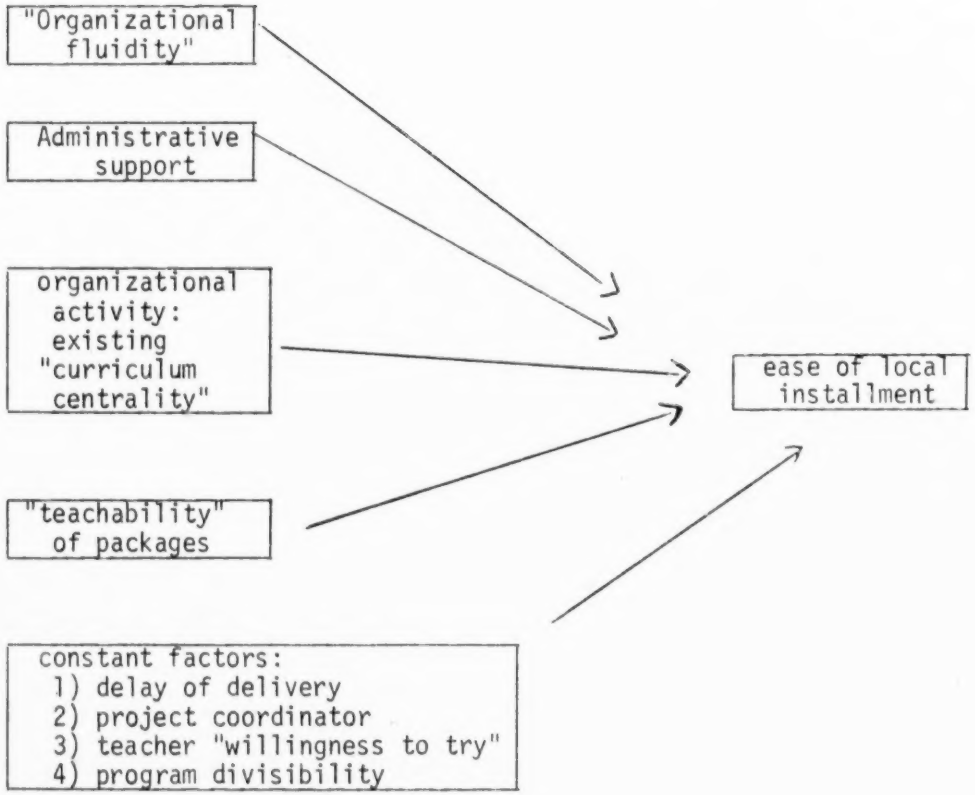

Figure 3: Antecedents to Ease of Installment in Districts

In Pennsylvania, the rate of implementation seemed related to five variables[24]: package congruency with the teacher's personal style of classroom management, teacher's "conceptual clarity" of aesthetic education, the package relevancy to the pupils arts culture, the "teachability" of the packages and positive pupil behaviors, and a cooperative faculty social system. If the rate of implementation decreased and the district intervened through "project pick up" procedures, then the rate of implementation was maintained or accelerated.

Package congruency with the teacher's personal style of classroom management is a concept we introduced earlier. At the Familiarization workshops, a particular style of classroom management congruent with the series of packages was described. For the classroom teacher, to hear it described in a workshop is one thing, but to see and feel her personal reactions to this style in her own classroom is entirely different. To be more specific, if a teacher found it frustrating to manage 10 groups of pupils at one time or to tolerate increased interaction or noise level in her classroom, she usually decreased her package utilization time. Similarly, if she did not like managing a variety of materials at once, or feel comfortable in a supervising role for a non-recitational activity, she decreased her package utilization time. The field notes reflected this:

> The CEMREL Coordinator and I talked to the teacher afterwards. She said very quickly, earnestly, and with meaning "the problem is me feeling easy with the role and the supervisors. You know, I've been trained that the kids are to be quiet and in their place". Then she went on to say "It's the supervisors". Then she said "But, I get so much good comments from the kids." (OBS: 1/26)

Teachers whose personal style of classroom management was more congruent with the package style did not decrease their package utilization time. However, most teachers eventually resolved these issues by either modifying their teacher classroom management practices or changing how pupils interacted with the materials. The point here is that even though package congruency with the teacher's personal style of classroom management became a minor element in extended implementation and program institutionalization, at the initial phase of implementation, teachers responded to this aspect of the curriculum first.

A second factor was the teacher's "conceptual clarity" for decision-making. As mentioned above, most teachers left the Familiarization Workshops with a vague notion of aesthetic education because of its "conceptual complexity" - e.g., that this curriculum could be package specific, a series of packages, a "resource" or "springboard" for integrating curriculum activities with basic

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[24]The terms "factors" and "variables" imply in this paper a qualitative, social science reference and not statistical quantification.

or general education, etc. Teacher decision-making was expected within each package and in sequencing the packages throughout the year. If teachers continued to "feel lost" or did not understand what was happening in the classroom, they usually decreased utilization time or misused the package. Often, without "conceptual clarity", a teacher related a package more to her own existing activities than to a concept of aesthetic education. For example, the most common initial reaction to one package, Creating Word Pictures, when a teacher had "conceptual confusion" was to use the materials for grammar and reading. The observer's note reflects this:

> ". . . Our interpretation was that the teacher used the words from Word Pix to teach grammar and reading. She did not use the words to teach images. . . . We watched her teaching the reading lesson using reading cards with words on them and there no transfer of word imagery to the reading cards that she's using with the reading lesson group. (Obs: We might assume that if the packages worked in the area of changing teacher behavior then the teacher would get the kids to look at the words not only for literal meaning but also for the images. In this case it was obvious that she did not see the transfer or integrate the package into her reading curriculum. In fact, it raises the question of whether she really understood the intent of the package.") 1/26

The degree of "conceptual clarity" in time became the most crucial factor in continued implementation and for the third phase, program institution aligation into the ongoing instructional activities. Because of initial package usage patterns, teacher "conceptual clarity" did not occur until May in some sites. At other sites, the project teachers seemed to have "conceptual clarity" by mid-year after the second and third packages arrived. By then teachers saw the interrelationships between the packages and between aesthetic education and other classroom activities. "Conceptual clarity" by the teachers seemed to vary with two factors: extent of package usage and/or amount of cooperativeness in the faculty social system.

Before turning to the faculty social system, several other elements effected the extent of continued usage. One was the degree of relevancy between the content selected in the packages to exemplify the arts and the local pupils arts culture. The arts content for most packages were often viewed as unconventional. Most teachers and pupils associated connotations of "catchy", "modish," impressionistic, modern, abstract with the arts content in constrast to conventional arts often found in schools. Conventional arts refers to those practical arts, similar to participatory folk culture, which are related to the local values, customs, celebrations, and available materials. A summary-observation raised this issue:

> Recently, during one of my visits to Pennsylvania, I encountered a set of experiences about which I've heard little talk and seen little written by AEP personnel. It developed this way. Upon entering the school, I was face to face with a group of older elementary kids who were square dancing. Later I was told they were getting ready for a Spring festival, which would also include vocal music and guitar playing. After watching that for a few minutes I found my way to a cup of coffee in the teachers lounge where several teachers were good humoredly teasing the itinerant art teacher about her morning activity. She was sewing together some nine small pot-holder-size weavings of the children into one large colorful wall hanging. As they were instructing her in arranging the multicolored pieces to eliminate clashes among the pinks, they chided her that the ragged back was as pretty as the front but that "they" wouldn't want it hanging in their rooms. In keeping with the tenor of the interchange, I was duly hesitant about taking it either. Later, after watching a creative lesson in which the Meter package activity was improvised into an orchestra - drums, rhythm sticks, clapping, and a leader who used the teacher's silk head scarf as a director's wand, I walked out to recess with the teacher. Across the field the junior high marching band was practicing for a crippled children's walkathon. The teacher was soon telling me about the high school band which was good enough to win prizes at the Mardi Gras and in a three state competition.
>
> The question all of this raises is where does AEP fit into a culture like this? Is there something that might be called Participatory Folk Art? Issues of cultural pluralism, disappearing rural localist traditions, the Deweyian concern for separatism of fine arts from practical arts, come to mind. Those of you with broader backgrounds in culture and the arts will see other more subtle implications. On the surface, it seems worthy of attention. (5/1)

The point here is that many teachers were puzzled, by pupil confusion, when they "knew" the pupils were familar with concepts and thinking - analytical processes of the package. The package Meter demonstrated this in particular. Once the teacher began to substitute the music selections to those more appropriate for the pupil arts culture, she felt pupils were learning and not just responding to the novelty. However, in order to substitute or supplement necessitated "conceptual clarity", an awareness of pupil arts culture, and a willingness for increased teacher preparation time.

Even when teachers had difficulty with the package teaching style, the relevancy of the pupil arts culture to the package arts content, and "conceptual confusion", the "teachability" of the packages and positive pupil reactions continued to induce them to use the packages. In a real sense, the pupils positive reaction to the packages influenced the teacher. We introduced the concept of "teachability" at the installation phase of diffusion, but at

implementation, it has different connotations. The summary notes reflect on a full day of observation when all of the first five packages were being used by seven different teachers at one site.

> A number of generalizations have come up, some very broad and some very narrow. I'll try to talk to a few of those.
>
> First, one of the most general conclusions is that the program is teachable. That may not be a very incisive one but it is a very important one. Yesterday I saw parts of all of the packages . . . Meter, Sound and Movement, Dramatic Plot, Word Pictures, and Characterization. Some of the lesson were review lessons and a return to the materials after some four, five, six weeks. This was the case with Word Pictures and also with Dramatic Plot. Some of it was very new and at the beginning, as in the case of Characterization, particularily, and Sound and Movement to some degree. (4/21)

"Teachability" here refers to teacher perceptions that the packages are materials which they can handle in their classrooms and to which the children respond positively. In general, most teachers who taught a series of activities or packages recognized that something important and of value happened to kids in aesthetic education. This reaction was stated by teachers, specialists, and supervisors. Most school people, especially those with long classroom experience, seemed to believe what they saw happening to their own pupils in their own classrooms in contrast to official statements.[25]

A related consistent theme throughout the whole year was the positive reactions of the kids to the packages. The Evaluators saw these reactions expressed in many idiosycratic ways as well as the classroom teachers, specialist, supervisors, and local Coordinators. The packages kept the attention of all age ranges and got the pupils involved in lengthy learning activities. It was a consistent observation throughout the year for all packages used. The teachers repeatedly commented on the quality, technical ingenuity, and beauty of the materials. Pupils got excited when "the box was pulled out", enjoyed the activities, and had fun while learning. The only minor disenchantment of the pupils was when the materials were too difficult for a child, and most teachers quickly made adjustments so the child could still participate.

The last factor which encouraged continued usage of the packages was the norms of cooperation in the informal faculty social system. In any new teaching experience or piloting of a curriculum, many questions arise from the daily interaction of the pupils with the materials. The availability of others

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[25]This seems related to Brickell's (1961) point regarding the need for demonstration sites in diffusion and to Maslow's (1966) point regarding the potency of tacit or suchness knowledge as contrasted with abstract knowledge.

who were also piloting the curriculum for informal discussions, developing ideas, and immediate feedback as the teacher analyzed her classroom experiences until she acquired her self-confidence in handling a new curriculum seemed important. Thus the "sharing" of a single package by several teachers and experienced train-teachers had some advantages in package implementation and for developing "conceptual clarity."

At the district level, the designation of a local Coordinator to aid in the implementation was the organizational arrangement, but how this worked out in practice depended upon the situation. As early as August, indications of different patterns of district support were present. Some districts sent to the workshops only the project teachers and the Local Coordinator; others sent the building Principal, itinerate specialists, and district supervisors. The position of the Local Coordinator in the district varied. They were supervisors, building Principals, school curriculum specialists, and assistant superintendents. During implementation, however, the particular formal organizational arrangements did not appear to be crucial in aiding the pilot teachers. Instead, the faculty social system or interaction patterns were more important.[26]

When a cooperative faculty social system existed, then informal situations such as morning recess, lunch, and playground duty became opportunities to share ideas on package utilization. If the itinerate specialists and/or the local Coordinator, regardless of his position, were part of the faculty social system, then they provided district support services. As one Coordinator said, whose office was not at the building site, "I'm in and out of their rooms all the time." In a very real sense, the often expressed need for aid[27] was eventually resolved by informal in-service training through the interactions of the teachers and others who were part of the faculty social system.

An alternative hypotheses usually suggested by those who have intimate knowledge or experience in curriculum development and implementation is that the variables related to the rate of implementation are not unique to aesthetic education but generalizable to any situation where local teachers implement a curriculum which they did not develop. The variations in the ease of installment and rate of implementation occurred because it was "new", the first attempt at implementing. In other words, the idiosyncratic responses were reactions to the educational change strategy in contrast to the curriculum itself. This alternative hypotheses appears reasonable, but because of the nature of this case study, we do not have sufficient data to accept or reject

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[26]We are aware that by this conceptualization of a school, we are suggesting that in order to understand the behavior of these teachers, viewing the school as a political unit, or organizational structure does not provide the fullest explanatory power. For an analysis of the role of faculty social systems see Smith and Kieth (1971) and Smith and Geoffrey (1966). For an analysis of social interaction strategies in planned change, see the "normative re-educative" tactics in Bennis, Beene, and Chin (1969).

[27]This is also suggested by teacher requests for the project Coordinator to be a demonstrating teacher and for the Evaluators to serve in supervisory roles to aid in package implementation.

it.[28] Hopefully, as other researchers study educational implementation processes, at lea t an accumulation of knowledge will result.[29] One additional variab e, that of "project pickup" does provide some insights in terms of local im lementation.

The Pennsylv nia project was a cooperative inter-organizational effort. The national labo atory was to provide two inputs to promote local implementation. One was th encouragement of "teacher willingness to try" the packages as a result of th Familiarization workshop. By and large, this occurred. The second input as the delivery of the packages. Since the RD and D educational chang strategy defines the product or curriculum is crucial to change educationa practices, without the packages, little would occur at local level excep disillusionment from decreased expectation, uncertainty. and unpredictable ess.

The delayed ackage delivery had several consequences for local implementation. Origi ally, teachers in grades K through 3rd grade had expected one or more packa es per teacher at the site at the beginning of the school year. Most of th 10 packages were recommended for second and third grades. The first two pac ages delivered in October and December were scheduled for the third grade. The project Coordinator after visiting six of the nine sites in January ith one of the Evaluators repeatedly said "We've lost the second grade eachers!" The field notes contained a summary of the situation by a local C ordinator, the building Principal.

The Principa said that what is happen is "the teacher's had mentally set aside time" by the end of the workshop, and since the packages didn't come, then this time was already used up. It is now a eal effort to try "to fit the packages in instead of making it a integral part of their program." The project Coordinator inda agreed. She said "we came in a year too soon."

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[28]Acceptance or rejection of an alternative hypothesis is more appropriate for a verificatio study which, by definition, our study was not intended to be. Program staff mem ers who are working in teacher education and diffusion, and who have intimate knowledge of the curriculum suggest this based on their experience. The ombined experience of Bernard Rosenblatt, Nadine Meyers, Suzanne Hoffa, and Stan M deja is extensive in time and national scope.

[29]We are awa e of a few rigorous studies of implementation processes in a planned, comprehe sive, complex, sequential educational change strategy although there is a consid rable body of literature on educational innovations. A systematic review of t e literature may be found in N. Gross, et al., (1971), Chapter 2.

> The Principal said, "But there are still advantages, it's still kind of a low-key experiment. The disadvantages are can you recapture the idea if it is a core thing in education, not incidental to education?" She recommended as a result of a delayed package delivery that there would have to be new workshops for next year. (1/25)

This Principal saw the delay of delivery effecting not only teacher "willingness to try" but also the long range goals of site program institutionalization.

The concept "project pick-up" refers to one organization monitoring and assessing its function within the whole project and if necessary intervening with its internal resources for project maintenance. Thus, when one organization in a sequential cooperative inter-organizational strategy delays in delivery of its project component, the mainteinance of the project depends on the second organization to "pick-it-up." We have already seen this at one site where both the project Coordinator and district officials recognized that the installment rate of the packages at the school was so slow that the project was endangered and the site was moved to another school in the district. At the implementation stage, when the delivery of the packages becomes difficult to predict, and the project rests on the packages, how does the local district maintain the project? How does the district fulfill all of the exchange arrangements to implement and diffuse a package which arrives late in the rhythm of school organization life?

One solution was "project pick-up." Package delivery was not only delayed but also "stretched-out" in that one package at a time arrived from October to April instead of the planned delivery of 10 packages or even five in September and five in January. Thus the whole project's tempo seemed like a "low-keyed experiment" as one Principal characterized it. Teacher implementation of the packages as each box arrived was monitored and assessed by both the project Coordinator and local personnel. Because the project's tempo was slow, and the project visibility was low, the implications of the assessment were often not realized until late in the year. The decision that the rate of teacher implementation necessitated formal, planned intervention with district resources rested with the district.

"Project pick-up" by the districts seemed to vary with how the district defined its first year functions within the project since the packages were delayed. Variations in district organizational response ranged from informal to formal procedures. In districts where a cooperative faculty social system existed and teacher "willingness to try" was present throughout the year, informal procedures were used. Essentially, the teachers were eager to try out the packages whenever they arrived and were able to adjust their classroom activities to use it. If there happened to be a teacher who was unwilling to try the package when it did arrive, usually a reminder by the Principal or pairing the teacher with an "enthusiast" was enough to get her started. Once

started, she often participated in the faculty discussions and "rap sessions" about the program. One Coordinator's solution to the lack of materials for the second grade teachers was to give the second package to arrive in Pennsylvania to them instead of placing it at the third grade as recommended.

In the few sites where latent teacher resistance to using the packages emerged when the delivery was late, then more formal district intervention occurred for "project pick-up." For example, one local Coordinator kept the packages at the district office and released the package only after a district supervisor had conducted an in-service training program with the teachers. The supervisor of the discipline or subject most closely related to the contest of the package was responsible for the in-service training. Thus the language arts supervisor conducted training programs for Dramatic Plot and Creating Word Pictures and the music supervisor did the same with Meter. The need for in-service work was expressed by one supervisor in these terms:

> "Teacher's are busy people; some need some spoonfeeding. It's giving a base so they can go right ahead back to the manual. But give them a choice, and they prefer to have in-service training. They need the rationale of the package to be able to interprete and to manipulate the games. Elementary teachers are use to manuals with step-by-step procedures. This stifles the creativity." She shows me an example of a reading manual. For the general public and the consumer she'll have to be more specific, but if you are too specific you loose teacher ingenuity or creativity. Therefore, you need in-service training in Pennsylvania. The manual is a "must" and aids in showing the developmental approach: to see the concepts building up in game one, two and three. It doesn't mean necessarily it's a step-by-step manual though. 2/23

Some supervisors used a "demonstrating teacher" approach and invited the itinerant specialist to observe the class with the regular teachers. One of these supervisors expressed the value of the "demonstrating supervisor" in terms of showing support for the teacher as well as the program. The field notes reflect this.

> He said . . . "The sincereity of the supervisor's must show. You go into the teacher's classroom and the teacher will believe it when she see's her own kids behave differently. You don't have faith in the packages unless you really try to teach them first. You don't stand back or at a distant" . . . He went on describing how he did follow-up in the classroom and visited the classroom and talked to the kids and the teacher after his demonstration. . . . He said also the second reason why he demonstrated was to show that I am sincere and I go out of my way to make this program work. (2/23)

"Project pick-up" seemed to be related to how the district redefined its first year functions within the project because of the delayed delivery. Although the exchange arrangements had envisioned the local districts implementing the program for purposes of district-wide and state diffusion, districts emphasized different aspects of the multiple arrangements. Thus most districts which did not intervene with "project pick-up" procedures stressed the necessity of site implementation and postponed the diffusion processes. They viewed the 1971-72 year more in terms of assessing the necessary organizational adjustments in order to implement the full program the following year when more packages would be at the site. The organizational adjustments, e.g., local "costs" in the exchange arrangements were district monies for teacher workshop time and project personnel from either local or state resources for in-service teacher-training in aesthetic education. Organizational adjustments by districts using informal "project pick-up" procedures were usually not voiced in terms of buying more packages for district diffusion.

Districts which did intervene with "project pick-up" procedures emphasized diffusion which necessitated teacher implementation. These districts assessed the ease of installment and the rate of implementation for district diffusion the following school year and for state visibility as a demonstration site. Thus, there was district intervention to 1) speed-up implementation through maximum usage of the packages, 2) minimize misuse of the packages and 3) purchase additional packages to diffuse the program in the district.

Districts which emphasized diffusion had a "cosmopolitan advocate" and those which stressed implementation had a "local advocate." These terms combine reference group theory suggested by R. Merton (1957) and the role of advocacy in program development (House, et al., 1970). R. Merton suggests that an individual's behavior may be explained by his reference groups - those groups to which he compares himself, identifies and patterns his behavior after, or aspires membership in. A local reference group in this study are those groups visible to the local district such as parents, school Board members, district personnel, civic and community groups. A cosmopolitan reference group in this study are those groups in the state project such as the PDE, state educational and professional associations, and national organizations.

The importance of an advocate in program development was identified in the evaluation studies of the Illinois Program for the Gifted. An advocate is one "who sees it in his own interest to promote the program. The advocate builds the organization necessary for implementing the program by recruiting and infusing them with basic values. At the same time he defends the integrity of the special program and sees that the adequate resources are allocated to it. . . . If the advocate is successful, the program becomes institutionalized." (House, et al., 1970, p. 27). In the Illinois program development, an advocate was most likely to be found in large districts with financial and personnel resources, and where the coordinator was a staff administrator or teacher who

was career conscious.[30] In Pennsylvania, there was no pattern among the cosmopolitan advocates based on position within the district or the project.[31] For state project development, the primary factor was not the position of the local Coordinator, the size of the district, nor the financial resources of the district. For project development, the crucial factor was the presence of a cosmopolitan advocate who assessed project costs and benefits in terms of the total district and not the school site.

Those districts which intervened in teacher implementation processes viewed the project in district or state references. Thus "project pick-up" procedures drew on district resources for district and state benefits. Those districts which did not intervene in teacher implementation processes viewed the project in district or site references. Thus, informal support services from within the school were used for district and site benefit. The point here is that variations in "project pick-up" by the nine districts effected the rate of implementation. Those districts with a cosmopolitan advocate stressed diffusion and intervened to speed up implementation. Those districts with a local advocate stressed teacher implementation and program institutionalization and allowed a more informal or natural implementation rate to occur. These processes are diagramed in Figure 4.

Insert Figure 4 about here

Although rates of implementation varied widely, the packages were used in multiple ways at each site. All sites planned to use the packages again next year. Teaching behavior was influenced by package utilization. Pupils participated in aesthetic education activities. As one Principal summarized what happened during the school year in aesthetic education, "without the

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[30]In Pennsylvania, the cosmopolitan advocates were not career conscience in the same manner as House, et al., (1970,), found. The cosmopolitan advocates did not seem interested in changing their positions but more in maintaining their positions in the district.

[31]An example where the Coordinator's position did not indicate project advocacy occurred when the local Coordinator participated in the Workshop but was not visible thereafter. The building Principal, who was part-time teacher and administrator for two schools, "picked-up" the project and disseminated the program to other districts, bought more packages and coordinated the site for demonstration to out-of-state visitors.

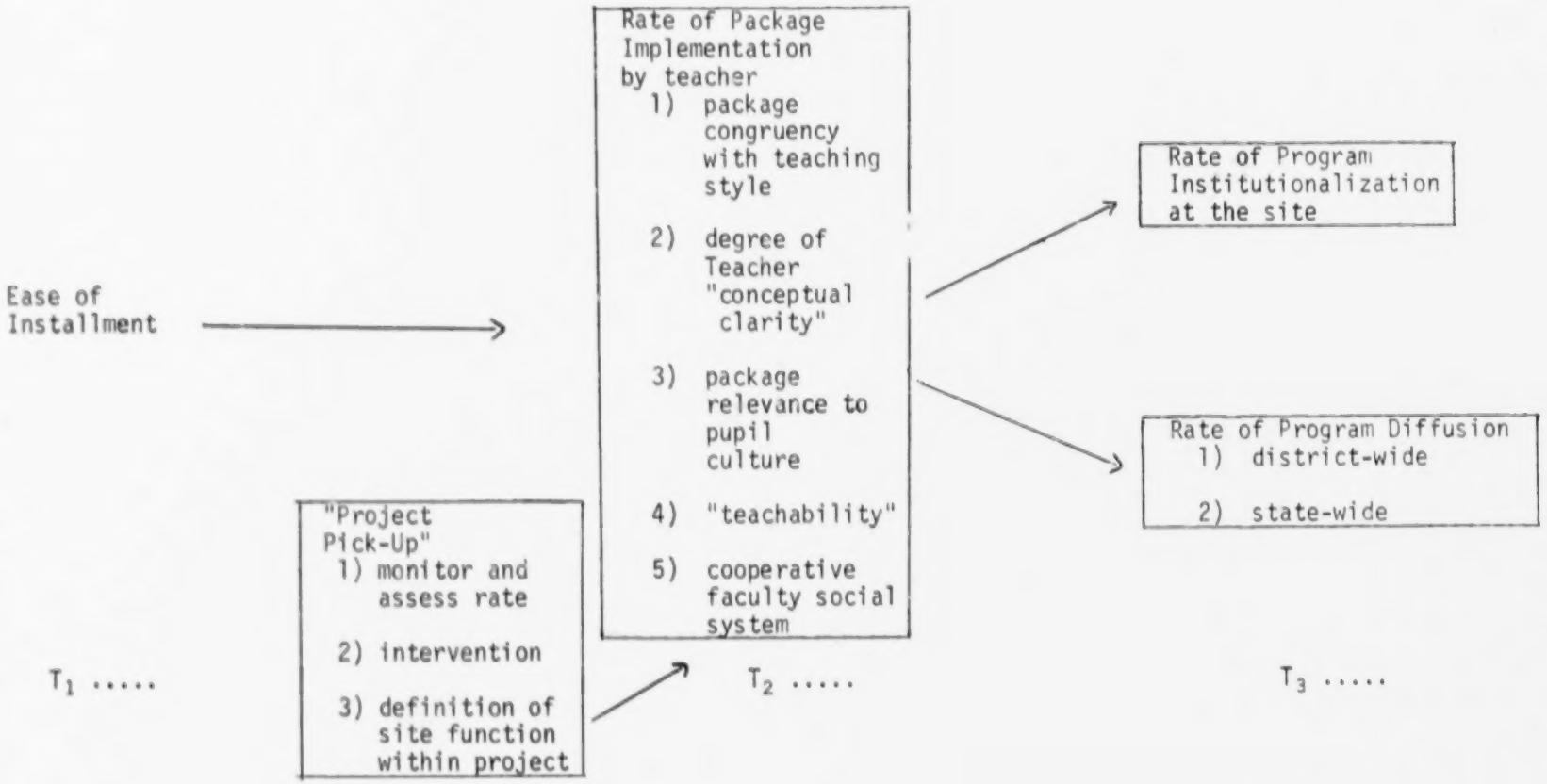

Figure 4: Antecedents and Consequences of Variations in Rate of Site Implementation

packages, I doubt if some concepts would have been taught in this way at this age . . . the content would not have been attended to in that style or at that grade level without the packages." She particularly valued the "style" of the packages. By this she meant that the child is asked to be an active participant in his learning activities.

Rate of District and State Diffusion

To continue a theoretical thrust introduced earlier, how did a strategy based on exchange arrangements effect the rate of district-wide and state diffusion? Diffusion here refers to the dissemination of aesthetic education for purchase and implementation. Toward the end of the school year the nine sites had received project benefits from the national organization: five free packages, a project Coordinator for administering the state project, and Familiarization Workshops. Although some of these benefits which occurred in unexpected ways and times were often viewed as disruptive to the rhythm of school organization life, they did occur. In addition, by the end of the year, the districts recognized the "teachability" of the program - that non-arts elementary teachers could teach the program and pupils learned things of value and liked the activities.

The project "costs" of the exchange arrangements to the local district "became visible at diffusion". During the installment and implementation phases, local district paid the "costs" in personnel and supervisory time, but these provided immediate local benefits: increased teaching expertise, staff development, and site visibility and publicity. At the diffusion stage, the district "costs" were planned in two forms: a) district purchase of additional packages to be used at other schools and b) continuation of the site to function as a demonstration center for state-wide diffusion. In other words, the program now installed and implemented at the site, was expected to primarily benefit the project.

These issues arose about mid-year because a few sites were already functioning as demonstration centers and school budgets were being drawn up in February and March to be finalized later. The most crucial factor for district and state diffusion seemed to be the minimum program visibility at that time. Program visibility refers to the site personnel feeling at ease in talking and demonstrating to visitors about aesthetic education as part of basic education for all pupils. Minimum program visibility was due to both the accumulated effect of delayed package delivery and, as has been suggested, the variations in rate of installment and implementation relating to local conditions. Thus only a few sites had institutionalized the program. The data for continuing program implementation came from the field notes as the participants stated concerns, expected outcomes and future intentions for the second project year.

Obviously we can only hyp[illegible]othesize that these intentions will materialize. The data for adoption rat[illegible]es is based on AEP purchase orders from Pennsylvania as of October, 1972.[32]

Turning now to how [illegible]inimum program visibility effected the exchange arrangements for distric[illegible] diffusion, we will assess continuing program implementation and insti[illegible]ionalization at the site, district-wide dissemination efforts and district pur[illegible]hase of additional packages. All nine districts agreed to participate in [illegible] the project next year. The generally slow rate of district implementation [illegible]rovided two benefits to the local district. Because fewer packages were simu[illegible]taneously utilized at each site, then the first year project teachers acquire[illegible] extended experience with these packages. Packages were available when they [illegible]wanted to re-use them. Thus a resource core of experienced teachers exi[illegible]ted within each district. Some districts were making plans to use this resour[illegible]e core for future in-service training. Several districts already prophe[illegible]ied organizational adjustment: the expert was the classroom teacher and he[illegible] job was teaching local pupils with other teachers, not in-service district [illegible]r project work. The field notes and an interpretative aside by the observ[illegible]r reflect one Principal's explanation to a visitor.

> He said Mrs. A, a c[illegible]assroom teacher, went to CEMREL last spring for the two day wor[illegible]shop there with 5-6 CEMREL staff; The CEMREL Coordinator, gets t[illegible]e program started - she doesn't train the teachers. She is c[illegible]ncerned with administrating the project. He said they were t[illegible] have a core of trained teachers by the end of the year, but it[illegible] been haphazard because of packages coming late. Mrs. A. has [illegible]ecome the leading Coordinator here. (Does she provide informa[illegible] teacher training and support service? Yet, she is a full time [illegible]eacher so there must be limitations. I imagine there is no[illegible] released time or extra pay, so she must do it for her own comm[illegible]ttment and possible social prestige. All this is conjecture) Mrs. A. will be the person sent to the conference next fal[illegible] for in-service for new districts in the project. (5/23)

Second, the utiliza[illegible]ion of fewer packages allowed time for more careful assessment of organizati[illegible]nal adjustment for district-wide diffusion. This took the form of plans f[illegible]r teacher workshops, changing package grade placement, and arranging package se[illegible]uencing. We suggest that as assessment continues at the nine sites, this wil[illegible] provide information for future district-wide installment and implemen[illegible]ation.

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[32]These are on file [illegible]as well as purchase orders from across the nation at the Diffusion Division o[illegible] CEMREL.

Several districts disseminated the program to other district schools. These districts were ones who had initiated "project pick-up" to speed up site installation and implementation. The advocate initiating the dissemination had a "cosmopolitan" or district orientation. The advocate seemed concerned about visibility of the project exemplified by either inviting with "pride" other district officials to see the program in operation or taking the packages when utilization was completed to other district schools. When the benefits of the program were more visible than the costs, the site organizational response was "pride". The benefits were more visible when informal procedures had been used to aid teacher implementation. In other words, the advocate was part of the cooperative faculty social system and to invite local visitors or to temporarily remove the package from the site did not disrupt school activities.

However, at a few sites, the advocate's dissemination efforts for district diffusion involved a site response of program "possessiveness" and disagreements. One Principal explained this response as recorded in the field notes.

> Dramatic Plot, he said, is in his book storage area and is his understanding that the teachers will go back to it later on. He felt that the teachers here worked too hard for them to let it go to other schools. He could disseminate information and make other district Principals aware of it and let them come and see it. But, that is not the problem he said. He's afraid he will not get the package back in the same way it was released. You can't replace the package for fifteen or twenty-dollars. (OBS/ I also had a very real sense that he was very "possessive" about this package which raised questions about how does a demonstration center diffuse when there's only one package being shared among the teachers and the materials get used? But, there's also a feeling of possession and investment. This is becoming the school's. Is this due to teacher time and usage and inservice here?). (2/23)

Upon further analysis, it appears that the Principal viewed the program in terms of not only cost in teacher time but also his time spent in scheduling and coordinating the usage of each package, formal district in-service training and visits of the district supervisors. In other words, because he administered the school in a highly organized manner, the program "costs" of scheduling were more visible to him than the benefits. As the program costs rose and site investment increased, program "possession" increased.

Finally, most district personnel who had monitored and assessed local program implementation wanted to buy additional packages for district diffusion. The awareness of the "teachability" of the packages was widespread among local participants. However, only three districts purchased additional AEP packages for district diffusion. Each of these districts had initiated "project-pick-up"

procedures although the procedures differed.[33] All of these districts had an advocate with a "cosmopolitan" or project orientation who viewed the project exchange arrangements as a balance between costs and benefits. They also saw educational change in a longitudinal perspective or "image of the future"[34] in addition to immediate visibility and prestige. Part of the envisioned future was anticipated negotiation and bargaining over scarce resources in future state educational projects.

The local Coordinator of districts not buying packages expressed two immediate local concerns - the district policy of "tight money" and the need for a rationale or method of justifying package purchase to the local school Board. To these districts, these reasons increased the project "costs" and were unanticipated at the time the district agreed to participate in the project. As the direction of national inflation became more uncertain, these school districts adopted "tight money" policies. They were not spending public monies on new program materials and in some cases not even maintaining the present operating expenses in order to shift the allocation of monies to priority items. The field notes record the perceptions of one local Coordinator.

> She pointed out very strongly that she didn't think there would be diffusion in the district. It's just too costly. They have cut back 25% of all the pencil and paper supply items in all schools; there are no new positions open; and there is even a cutback in the district central staff. This school does not qualify for Title III monies. She thinks the people who should be approached are those who have the money and she mentioned Model Cities money. (OBS: Again the reference to the inflation within the American culture and the economy at this time. It seems that AEP came out with a new product which took them four years to develop and are going to put it out on the market at a time when no one had money for what is still considered frills or extras.) (5/26).

Some districts expressed concern over the need to justify expenditure of monies on aesthetic education materials in terms of the community's values.

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[33]One district where the site had institutionalized the program, released the Principal and a teacher for a day for program dissemination to another district. Other procedures were formal district inservice training and participation in a state Title III project in aesthetic education.

[34]The importance of "images of the future" in organizational life is demonstrated by Baldridge (1970) and Thompson (1967).

educational mores regarding schooling and public accountability. These districts felt the local educational values and mores stressed that basic education should consist of the three "R's" and the more emphasis on this, the better the quality of education. To suggest the purchase of a program which might touch off public conflicts over educational values when school bond issues and tax elections were being voted down was an unanticipated project "costs." At this time, the "cost" was considered too high. The field notes reflect how one Coordinator summarized it.

> He said with some concern that he is not sure the district will be willing to spend $100.00 a package for something that they can't test and show the results to the Board. He went on to say you can't test it like basic skills. (OBS/It's not that they don't believe in it, but its not necessary to spend money on it - the school can do their own as the play demonstrated this afternoon. This Board is building the high school addition for an arts program without voter elections but using their own executive powers to raise the tax rate. This is in a district which has the image of being one of the richest in the state. . . . . Is he asking for evaluation information to fit the values of the Board and parents - that the Board and parents want basic skills first? The whole question of the RD and D approach to educational change and user felt need is raised again.) (5/23)

The program materials, CEMREL and state department officials at the Familiarization Workshops and the project Coordinator justify aesthetic education as part of basic education for every child. It was viewed as an "area of study" which had long been neglected in basic education and which would promote quality education for schools. However, this justification or rationale was more asserted than explained or demonstrated to the site participants. "Basic education" and "quality education" were frequently used terms which were not defined. Perhaps, specific definitions must be left to the local district. The three "R's" - reading, writing, and arithmetic - would probably have different meanings in a rural community, a low economic urban community, and a high middle class community. Each of these communities, all represented in the nine sites, would expect basic education to serve different purposes in furthering educational and occupational aspirations for their children.

Although aesthetic education was justified as part of basic education, the rationale, as are most program rationales, was vague and abstract. The language of school people seemed to demand concrete examples of aesthetic education as basic education in a school in "lay" or everyday terms as well as

philosophical and aesthetic terms.[35] For example, the Evaluators in their report attempted to describe how an aesthetic education program could be communicated to a non-arts trained person. We will cite only the summary.

> "An aesthetic education program must accent each of these parts. It must deal with multiple art forms and the special definition of beauty in those forms. It must permit, allow, and stimulate (perhaps demand?) that pupils develop skills in the complex roles of creator, or performer, of implementor, of appreciator, and of critic. Finally, the program must do this in a manner and style that develops an active interest or joy."[36]

Districts which bought more packages had developed a justification for expenditure of public monies. Most districts recognized that their rationales did not define aesthetic education as school people did nor as the project did. The justifications were an attempt to define aesthetic education in terms of the community educational morales. Each district purchasing packages represented a different type of community and a variety of publics. Reasons were: 1) joy in learning which encourages a child to stay in school and continue his education, perhaps even beyond the mandatory attendance age, 2) new vocabulary and spelling skills not otherwise provided for in the curriculum, 3) reading skills through use of booklets, cards, 4) thinking skills through creating, analyzing, and responding to arts products, 5) counting skills in the activities, 6) writing skills in production of certain arts, 7) reading, and math comprehension skills used in standardized tests and college entrance exams, 8) ability to follow directions independently, 9) physical skills in manipulation of one's materials and through self-expression, 10) responsibility for one's materials and respect for those of others and 11) social skills in working with others. Carried to the extreme, this approach suggests that if the basic skills are the same as those in other "areas of study" then why spend public monies on a new program.

None of the districts voiced rationales which would highlight the unique aspects of aesthetic education and thus provide the justification for its inclusion in the curriculum. For example, none suggested aesthetic education encouraged 1) perceptual or sensory skills required in certain occupations and recreation forms, 2) enjoyment of the arts as a hobby or pastime, 3) continuing interest as a possible occupational choice in a practical or professional arts-related area such as architecture, draftsmen, engineer, designers of clothing, homes, means of transportation or sales occupations emphasizing visual displays, multi-media TV ads, etc.

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[35]The closest program document is Madeja (n.d.). The program materials present a rationale in aesthetic terms and H. Broudy (1972) argues on a philosophical level.

[36]For explanations see Smith and Schumacher, op cit., Chap. 4.

The point we are making here is that most districts, by the end of the school year, had not yet developed a rationale for aesthetic education expressed in terms of the community educational mores. This was partially due to minimum program visibility. The packages at the site represented only three of the arts: drama, music, and literature. Most sites were visible at the program implementation stage but not yet at institutionalization. In other words, most school people "saw" the new activities in relation to other subject skills, and not those unique to the arts. This is also related to the term "aesthetic education." The need for a rationale of an innovative curriculum which is already supported by state law and community values such as language arts or math may not be so imperative as these districts indicated was the case for a program with a "new" label, aesthetic. Without a rationale in terms of the local educational mores during a period of "tight money", these districts were unwilling to assume unexpected additional "costs."

District "costs" were also expected when the site functioned as a demonstration center for state-wide diffusion. Two sites served as demonstration centers during the first project year. One demonstrated to college visitors because of previous institutional arrangements for practice teachers and geographic proximity to a state university. At the second site, the rate of implementation and institutionalization was rapid enough to allow the project Coordinator to use it as a demonstration center for out-of-district visitors. However, most sites had enough inquiries and/or visitors to anticipate the local "costs."

Most school people recognize that each school is a "particularistic institution" even though commonality exists among schools as organizations. As public institutions, schools are legally "open" to the public. But, each school also has the major responsibility of pupil instruction. Thus many school officials welcome visitors as long as they do not unduly interfere with the instructional activities and they have time to explain their "particularistic institutions."

There were two reactions by the local sites regarding demonstration to visitors during the first project year. One was to consider the first year as that of implementation and postpone demonstration activities. In some cases, as exemplified below, the Observer felt postponement coupled with no organizational planning for demonstration the second year meant viewing the "costs" as too high for the benefits. The summary observation demonstrates this.

> I get the feeling that because of this "tight money" and this school does not qualify for Title III that, in essence they are getting free packages, and I bet they are going to hang on to them. And thus the school benefits because the Principal was smart enough to see the opportunity to get her school involved in it and hang onto the materials to fit within her school, their philosophy and their teachers. There's been no real effort to try to diffuse it or to be a demonstration center or do anything more. Perhaps it has to be for at least the first year. 5/26

A second reaction was to plan for organizational adjustments for the site to function as a demonstration center. However, these were adjustments to minimize the "costs" and maximize the project benefits of local and state visibility. The adjustments were to minimize coordination "costs" without buying more packages. The field notes describe one example and the observer's interpretation.

> He wants to schedule the packages next year by teacher and level, still only package here, but also by hours. He referred to "all these visitors." (OBS/sounds like visitors are perhaps creating difficulty and more time on his part when he is not in public relations for AEP nor a demonstrator agent. He has the whole school and many publics. I don't know how many visitors he is talking about. It may be a potential conflict situation because demonstration and visitors take time and a possible conflict between local orientation and state or project orientation.) 5/23

The consequences of the minimum state visibility of the demonstration site were two-fold: delayed "natural" state-wide diffusion and "project maintenance" through state department intervention. Three districts outside of the nine project districts purchased aesthetic education materials. One of these districts was geographically tangent to the site which moved rapidly to institutionalization and demonstration. The second district had bought the packages for 1971-72 but was not a part of the state project. We have no information regarding the third district. Thus, our data is insufficient to identify a pattern of "natural" diffusion.

The diffusion to twelve new sites did occur through "project maintenance" by state department intervention. "Project maintenance" is conceptually distinct from "project pick-up" by the local districts. "Project pick-up" referred to intervention when one project component unexpectedly slowed down, e.g., package delivery or implementation, and intervention was to speed up the processes. The state department, through the exchange arrangements, was expected to establish a state-wide diffusion network through its resources. As early as November, when delivery of ten packages was still scheduled by February, processes were initiated by the state department which resulted in a Title III Aesthetic Education Project.

The Title III project, as developed by a local school district, will contain four components: instruction, teacher education and staff development, evaluation and research, and administrative and coordination. Twelve new pilot districts are established, geographically dispersed over the state but close to one of the present nine districts in the project. Aesthetic Education materials will be supplied through a cooperative arrangement with local district and Title III monies for a 3 year period. An in-service project workshop was held for the new district personnel. A project Coordinator will be appointed. The project will involve kindergarten through third grade students at 12 schools and in four new school sites in the local administrative district. Thus, approximated, 3200 pupils will be using the materials during the 1972-73 year.

Insert Figure 5 about here

To summarize we conceptualized the study of local implementation in terms of rate of instal ment, implementation, institutionalization and adoption. Perhaps an analog will help place the events of the first year in its larger perspectiv e. W. W. Rostow, in a provocative essay, The Take-off into Self-Sustained Gr owth (1964) identified three periods of economic development: a long period whe e pre-conditions for take-off are established, take-off itself, and a lon g period where growth becomes normal and relatively automatic. The t ake-off period requires a leading group to take the risks and acquire the autho ity to install and diffuse an innovation which sets in motion the societ 's expansion impulses and backlog of resources.

A high proportion of the increment during the take-off period must be returned to productive inv estments. He argues that for the transformation from take-off to self- sustained growth, the most important factor is the "development of society" in ce tain economic sectors to perpetuate investments. The first project year in P ennsylvania seems analogous to the "take-off" period which identifies the le ading groups, sets in motion district and state organizational changes, requires high increment to be returned to the project investment, and perpetuates self- reinforcing growth which will result in regular acceptance and implementation of innovation.

Section III: CONCLUDING REMARKS: THEORETICAL ISSUES AND STRATEGIES FOR PROGRAM DEVELOPMENT

In conclusio n, let us summarize the major findings of this study of an RD and D strategy to diffuse a state adopted curriculum district-wide and state-wide. The study concentrated on the first year events at nine districts where the curricu lum was to be installed, implemented, and then purchased during the first year of a five-year project. We will first summarize our findings at the r ine local sites and then suggest theoretical implications for an inter-organiza tional diffusion strategy and the RD and D approach to educational chang e.

The first ma jor finding was that rates of site installation, implementation, and institutional ization varied and this variation was more related to district factors than the curriculum per se. Thus at installation, minimum "organiza- tional fluidity, administrative support, existing "curriculum centrality" and perceived "teach bility" of the packages by non-arts trained elementary teachers

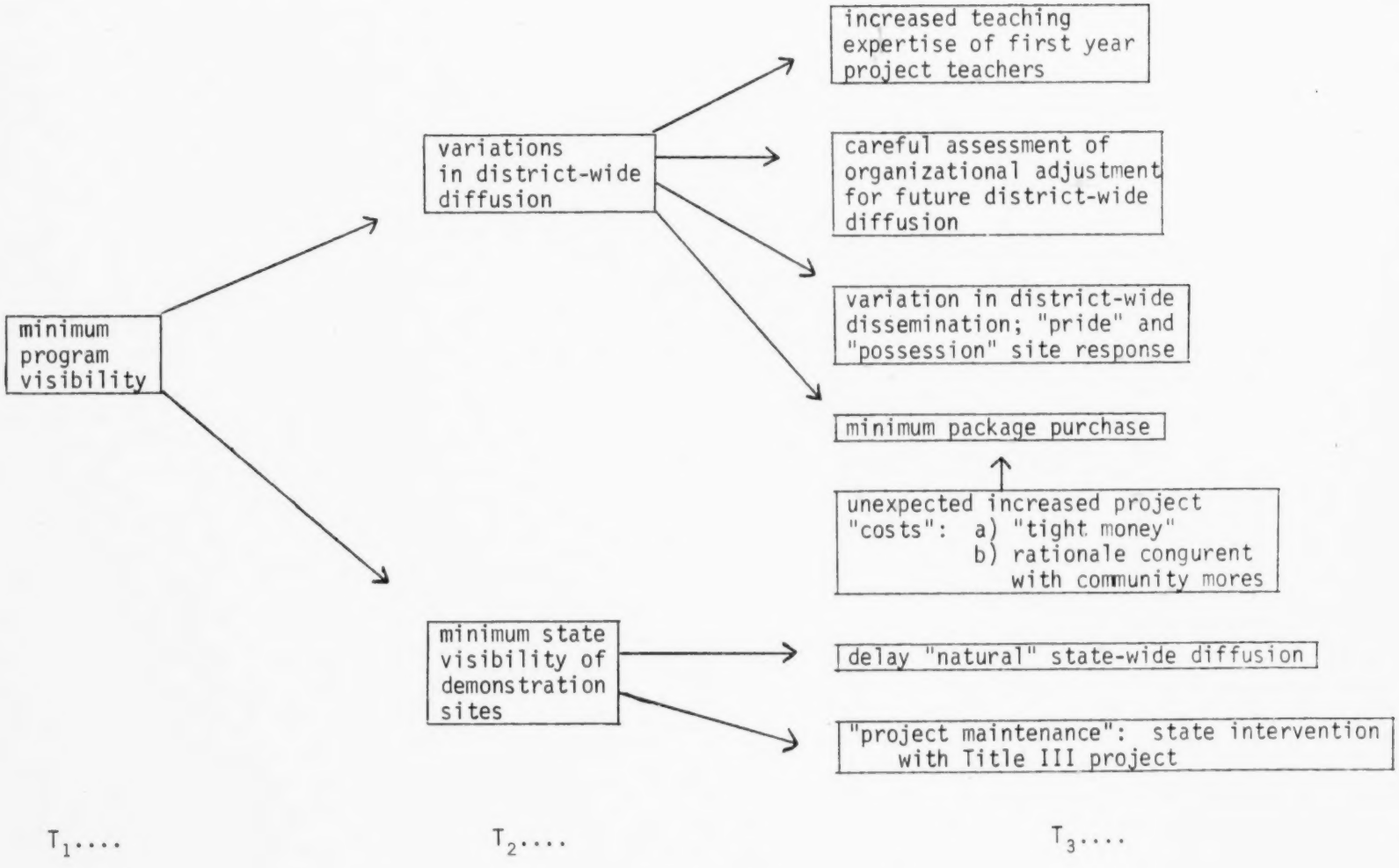
minimum program visibility
variations in district-wide diffusion
increased teaching expertise of first year project teachers
careful assessment of organizational adjustment for future district-wide diffusion
variation in district-wide dissemination; "pride" and "possession" site response
minimum package purchase
unexpected increased project "costs": a) "tight money" b) rationale congurent with community mores
minimum state visibility of demonstration sites
delay "natural" state-wide diffusion
"project maintenance": state intervention with Title III project
T1....
T2....
T3....

Figure 5: Rate of District and State Diffusion (to October, 1972)

effected the ease of local installment. We hypothesize that as these factors increase, the rate of installment increases. The rate of installment, in turn, effected the rate of implementation. Implementation by the teacher varied with degrees of package congruency with her teaching style, teacher's "conceptual clarity," package relevancy to the pupils' arts culture, the "teachability" of the packages in the classroom, and the cooperative faculty social system. We suggest that as these factors increase, the rate of implementation increases.

The second major finding was that if the rate of implementation slowed and the district intervened with "project pick-up" procedures, then the rate of implementation was maintained or accelerated. This suggests that variations in rates of implementation may be more related to the RD and D diffusion strategy than to the curriculum per se. This seems reasonable if one contrasts a local innovation which is diffused through a single district organization and social system to that of a national innovation which is diffused through an inter-organizational project.

Third, it is at the diffusion stage where the project "costs" of package purchase and site demonstration to state visitors becomes more visible, and predictable. The exchange arrangements up to that point had benefited the district's maintenance and enhancement needs. Now the district "costs" were expected to benefit the district as well as the maintenance and enhancement of the project. If a district had a cosmolition advocate and high investment through "project pick-up", then the project costs were maintained during the first year. If a district had a local advocate and minimum project investment, then some project costs were postponed. Within the maintenance and enhancement of each member organization in an inter-organizational strategy lies the dynamics for continued project development.

One might ask why complicate an inter-organizational diffusion strategy by adding a third organization, e.g., the state department of education. Once the sites were identified, during the first year the state department had minor inputs into the rate of local implementation and district-wide diffusion. Why not depend on "natural" diffusion processes through word of mouth and merely use the state department of education for endorsement to legitimize a decision? When the single most important component of the RD and D change strategy, e.g., the product, was delayed and local implementation varied, "project pick-up" for state diffusion was done through a Title III project. Thus diffusion to 12 new districts was maintained even though unanticipated events occurred. Second, future use of state department resources were part of the envisioned benefits to some districts. These districts intervened to speed up district diffusion and thus state visibility in anticipation of exchange of benefits and costs in future state department projects.

As the balance between maintenance and enhancement of each member organization and the maintenance and enhancement of the project increases, the project continues to develop. The maintenance needs of each organization have elements of commonality and yet are particularistic in structure, organizational resources and the rhythm of maintenance. Each organization received sufficient benefits to justify organizational costs during the first year of the project and envisioned a similar occurrence for the school project year. Thus, at various formal project meetings, the organizations agreed to continue the project.

The organizations also agreed to exchange projects benefits and costs. CEMREL would continue to develop and supply packages for summative evaluation at the nine sites. Presumed project and lab visibility would increase the curriculum market not only in Pennsylvania but across the United States. The state department of education fulfilled the governatorial platform, a state curriculum void, and began to redefine the role of the Fine Arts Bureau. They planned to extend Quality Education programs through the diffusion network and implement teacher education programs as they took over the project coordination and monitoring responsibilities. The local districts acquired a curriculum to fill a perceived need and would continue to supply sites and personnel for program implementation and local assessment for future district diffusion.

Turning now to broader issues of educational change strategies, our initial conceptualization of the Pennsylvania project noted two characteristics a highly planned approach with built-in flexibility. To review briefly, the scope was state-wide in contrast to local innovation or national diffusion of a curriculum. The approach is rational, sequential, comprehensive, and complex. It is rationalistic in the long-range planning. It is sequential in the linear development of each project component. It is comprehensive in the number of people involved and tasks to be done. It is complex in the variety of organizational tasks and an envisioned configuration or spread of diffusion. Finally, the overriding tone is one of cooperativeness, not competition, between the various organizations within the project. We suggested earlier that this aspect of cooperativeness could be viewed as an exchange process to share scarce resources within a competitive social, economic, and political milieu. Thus, this aspect of cooperativeness provides the organizational dynamics to minimize ripples of reactions and adjustments to events which are unanticipated and/or unintended in a complex and comprehensive change strategy.

Our analysis of the Pennsylvania project suggests the following propositions:

1. In a highly comprehensive inter-organizational change strategy, as the complexity increases, then the range of inter-organization benefits increases.

2. In a highly comprehensive inter-organizational change strategy, as the complexity increases, then the range of inter-organizational resources for project maintenance increases.

3. As organizational maintenance and enhancement needs of members become more visible through inter-organizational maintenance, then organizational investment in the project increases.

4. As organizational maintenance and enhancement needs of members become more predictable through inter-organizational maintenance, then organizational investment in the project increases.

5. In an inter-organizational strategy, as the degree of rationality, sequential processes, and complexity increases, then organizational monitoring, assessment, and adjustment for maintenance increases.

6. If unanticipated events decrease rational sequential, complex inter-organizational outcomes, then organizational project investment will occur for future benefits outside the domain of the existing inter-organizational arrangements.

Finally, the continuation of diffusion processes through the exchange arrangements within this RD and D approach suggests that reliance on primarily rationalistic, comprehensive, and systematic planning may be insufficient for diffusion. The mere existence of such an elaborate diffusion project challenges the rational and social theories of diffusion. Both of these fail to give full consideration to the "particularistic" educational organizations and the competitive milieu in which educational diffusion occurs.

The rational theory of diffusion assumes that dissemination to national mass audiences leads automatically to state adoption and local purchase of the product. The presentation of studies describing product proficiences by a research - based organization is considered adequate to legitimize the spending of public monies. Educators presumably respond to rationality and logical reasoning. This study suggests that school officials often justify curriculum adoption on the basis of community educational mores and values. Although few communities would go so far as to deny the need for an education, disagreements exist over educational priorities and how these are to be obtained in a local school district. Research demonstrating product proficiencies is essential information but it is only one input into the district purchase decision.

The social theory of diffusion assumes that adoption is related to the channels of communication and sources of information, e.g., the "opinion leaders". Adoption is based on "prestige suggestion" and "who you know" in a social

structure. The social structure may be superintendents, curriculum directors, Principals, specialists, etc. This diffusion strategy involving a national laboratory, a state department of education and nine local districts combined a variety of opinion leaders and social structures. Although these social structures and processes were important for initiating interest in the product, visibility of the product in the school and assessment by visitors and district personnel were additional factors in purchase decision.

Neither the rational nor social theories of diffusion appear to give adequate consideration to local district variations in a competitive milieu. Competition exists over the usage of scarce resources such as classroom time, personnel, and public monies. Curriculum adoption decisions are justified not in terms of filling a "vacuum" but providing a better usage of local resources for existing educational goals. Educational goals are phrased in terms of community educational mores. Exchange arrangements allow flexibility for the "particularistic" educational organizations and the variations in community mores and resources. Thus, diffusion of educational products through inter-organizational exchange arrangements seems a viable approach in program development.

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